CLAIMS

1. A system for testing a radio frequency (RF) device, the RF device having a body and an antenna, the antenna being configured to propagate an RF signal, said system comprising:

a coupler configured to facilitate coupling between an RF signal and an RF device, said coupler comprising:

a conducting member having a base wall, said base wall being configured to engage a portion of the body of the RF device;

an antenna-receiving member configured to receive at least a portion of the antenna; and

a tuning member configured to receive at least a portion of the antenna therein, said tuning member being aligned with said antenna-receiving member such that at least a first portion of the antenna is receivable by said antenna-receiving member and at least a second portion of the antenna is receivable by said tuning member;

wherein resonance in a coupling coefficient of an RF signal injected into said coupler via said antenna-receiving member and said conducting member is tuned by said tuning member.

2. The system of claim 1, wherein the RF signal is injected in a first direction, and a coupled signal corresponding to the injected RF signal is characterized by a second direction, the first direction being substantially opposite to the second direction.

3. The system of claim 1, wherein a resistive load is electrically coupled between said antenna-receiving member and said conducting member, said resistive load being configured to increase the coupling coefficient.

4. The system of claim 1, wherein said antenna-receiving defines an orifice and said tuning member defines a cavity, said orifice being configured to receive at least a portion of the antenna therethrough, said cavity being configured to receive at least a portion of the antenna therein.

5. The system of claim 1, wherein a resistive load is electrically coupled between said antenna-receiving member and said conducting member, said resistive load being configured to reduce a voltage standing wave ratio (VSWR) of said coupler.

6. The system of claim 1, wherein tuning of the resonance in the coupling coefficient of the RF signal is further defined as damping the resonance in the coupling coefficient of the RF signal by said tuning member.

7. The system of claim 1, further comprising:

test equipment electrically communicating with said coupler, said test equipment being configured to determine a characteristic of the RF signal.

8. The system of claim 1, further comprising:

means for supporting said tuning member.

9. The system of claim 1, wherein tuning member is formed of ferrite.

10. The system of claim 1, wherein antenna-receiving member is formed of brass.

11. The system of claim 1, wherein said conductive member has a side wall, said side wall extending outwardly from said base wall such that said base wall and said side wall form an L-shaped configuration, and wherein engagement of the RF device with said side wall tends to align the antenna with said antenna-receiving member and said tuning member.

12. The system of claim 4, wherein said antenna-receiving member has a proximal end with a contoured periphery, at least a portion of said contoured periphery being configured to engage the RF device such that the antenna of the RF device is substantially completely insertable within said antenna-receiving orifice.

13. The system of claim 4, wherein said tuning member engages a support member, said support member being configured to align said antenna-receiving orifice with said cavity of said tuning member.

14. The system of claim 4, further comprising:

an RF connector engaging electrically engaging said coupler, said RF connector being configured as a coaxial cable connector having a pin and an exterior shield, said pin electrically engaging said antenna-receiving member, said exterior shield electrically engaging said conducting plane.

15. The system of claim 6, wherein said damping occurs at a frequency of approximately 850 MHz.

16. The system of claim 6, wherein said support member engages said antenna-receiving member such that said support member maintains a spaced arrangement of said antenna-receiving member and said conducting plane.

17. A method for coupling an RF signal between an RF device and test equipment, the RF device having a body and an antenna, the antenna being configured to propagate the RF signal, said method comprising the steps of:

providing an RF device;

at least partially surrounding a first portion of the antenna of the RF device with a tuning material;

coupling an RF signal to a second portion of the antenna, the second portion of the antenna being disposed between the first portion and the RF device body.

18. The method of claim 17, wherein the step of coupling an RF signal to a second portion of the antenna comprises the step of:

injecting the RF signal in a first direction such that the coupled signal corresponding to the injected RF signal is characterized by a second direction, the first direction being substantially opposite to the second direction.

19. The method of claim 17, wherein resonance in a coupling coefficient of the injected RF signal is damped by the tuning material.

20. The method of claim 18, wherein the step of injecting the RF signal comprises the step of:

injecting the RF signal with test equipment;

determining a characteristic of the coupled signal; and

tuning the RF device based upon the characteristic of the coupled signal.